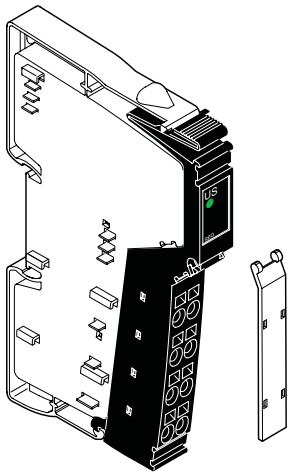
IB IL 24 SEG (-PAC)

Inline Segment Terminal Without Fuse



AUTOMATIONWORX

Data Sheet
5566_en_03

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Description

The terminal is designed for use within an Inline station. The segment terminal is used to create a partial circuit (segment circuit) within the main circuit.

Features

This terminal does not have an INTERBUS protocol chip and therefore is not an INTERBUS device.

- Creation of a partial circuit within the main circuit using an external jumper or switch
- Diagnostic indicator

This data sheet is only valid in association with the IL SYS INST UM E user manual or the Inline system manual for your bus system.

Make sure you always use the latest documentation.
It can be downloaded at www.download.phoenixcontact.com.

A conversion table is available on the Internet at
www.download.phoenixcontact.com/general/7000_en_00.pdf.

This data sheet is valid for the products listed on the following page:

Ordering Data

Products

Description	Type	Order No.	Pcs./Pkt.
Segment terminal without fuse including accessories (connector and labeling field)	IB IL 24 SEG-PAC	2861344	1
Segment terminal without fuse; without accessories	IB IL 24 SEG	2726324	1

One of the connectors listed below is needed for the complete fitting of the IB IL 24 SEG terminal.

Accessories

Description	Type	Order No.	Pcs./Pkt.
Connector (black, w/o color print)	IB IL SCN-PWR IN	2727462	10
Connector (black, with color print)	IB IL SCN-PWR IN-CP	2727637	10
Labeling field (width: 12.2 mm)	IB IL FIELD 2	2727501	10

Documentation

Description	Type	Order No.	Pcs./Pkt.
User manual: "Automation Terminals of the Inline Product Range"	IL SYS INST UM E	2698737	1
User manual: "Configuring and Installing the INTERBUS Inline Product Range"	IB IL SYS PRO UM E	2743048	1

Technical Data

General Data	
Housing dimensions (width x height x depth)	12.2 mm x 120 mm x 71.5 mm
Weight	42 g (without connector); 57.7 g (with connector)
Ambient temperature (operation)	-25°C to +55°C
Ambient temperature (storage/transport)	-25°C to +85°C
Permissible humidity (operation/storage/transport)	10% to 95% according to DIN EN 61131-2
Permissible air pressure (operation/storage/transport)	70 kPa to 106 kPa (up to 3000 m above sea level)
Degree of protection	IP20 according to IEC 60529
Class of protection	Class 3 according to VDE 0106, IEC 60536
Connection data for Inline connector	
Connection method	Spring-cage terminals
Conductor cross-section	0.2 mm^2 to 1.5 mm^2 (solid or stranded), 24 - 16 AWG

Interface	
Local bus	Through data routing

Transmission Speed	
Can be used in Inline stations with a transmission speed of either	500 kbps or 2 Mbps

Power Consumption	
Communications power U_L	–
Current consumption at U_L	–
Power consumption at U_L	–
Main voltage U_M	24 V DC (nominal value)
Nominal current consumption at U_M	8.0 A (maximum permissible total current in the potential jumpers U_M and U_S)

I/O Supply Using Bus Coupler/Supply (U_M)

Connection method	Via potential jumpers

24 V I/O Supply (U_M, U_S)

The main voltage U_M is supplied by the bus coupler or by a power terminal. The segment voltage U_S is provided at this segment terminal by connecting a switch or a jumper on the segmentation level.

Connections for the supply voltage are not required on the segment terminal. Terminal points 1.1, 2.1, 1.2, 2.2 must not be used for voltage supply but **only** for the connection of a switch or a jumper on the segmentation level, and for measuring purposes.

Safety Equipment

Overload/short circuit in segment circuit	No
Surge voltage	Protective elements in the power terminal or the bus coupler
Polarity reversal	Protective elements in the power terminal or the bus coupler

Electrical Isolation/Isolation of the Voltage Areas

To provide electrical isolation between the logic level and the I/O area, it is necessary to supply these areas via the bus coupler or via the bus coupler of the power terminal from separate power supply units. Interconnection of the power supply units in the 24 V area is not permitted. Please also pay attention to GND/PE connections on the power supply units (see also user manual).

Common Potentials

The 24 V main voltage, 24 V segment voltage, and GND have the same potential. FE is a separate potential area.

Separate Potentials in the System Consisting of Bus Coupler/Power Terminal and I/O Terminal

- Test Distance	- Test Voltage
5 V supply incoming remote bus / 7.5 V supply (bus logic)	500 V AC, 50 Hz, 1 min
5 V supply outgoing remote bus / 7.5 V supply (bus logic)	500 V AC, 50 Hz, 1 min
7.5 V supply (bus logic) / 24 V supply (I/O)	500 V AC, 50 Hz, 1 min
24 V supply (I/O) / functional earth ground	500 V AC, 50 Hz, 1 min

Error Messages to the Higher-Level Control or Computer System

None

Approvals

Information on the current approvals can be found on the Internet at www.download.phoenixcontact.com.

Local Status Indicators and Terminal Point Assignment

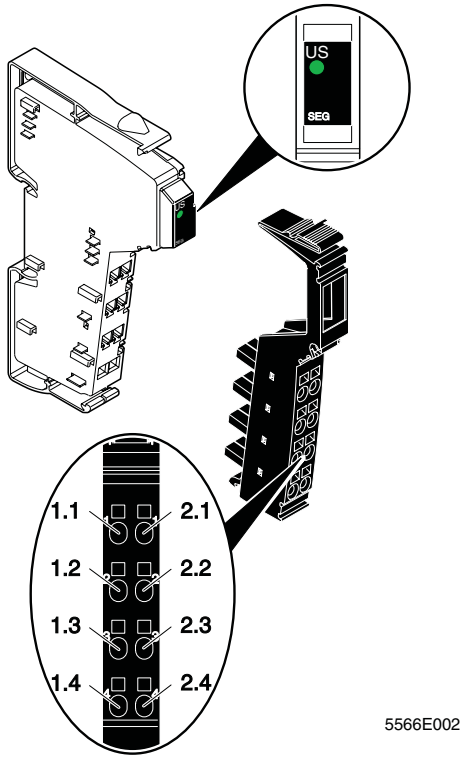


Figure 1 Terminal with appropriate connector

Local Status Indicator

Desig.	Color	Meaning
US	Green	24 V supply (in the segment circuit U_S)

Function Identification

Black

Terminal Point Assignment

Terminal points 1.1, 2.1, 1.2, 2.2 must not be used for voltage supply but **only** for the connection of a switch or a jumper on the segmentation level, and for measuring purposes.

Terminal Point	Assignment
1.1, 2.1	Segment voltage U_S Connection of a switch or a jumper on the segmentation level
1.2, 2.2	Main voltage U_M Connection of a switch or a jumper on the segmentation level
1.3, 2.3	GND of the supply voltages
1.4, 2.4	FE connection

Internal Circuit Diagram

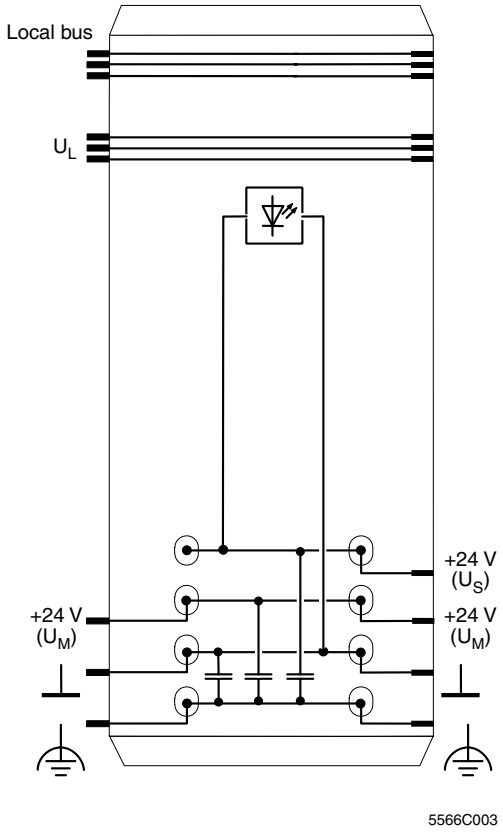


Figure 2 Internal wiring of the terminal points

Key:

LED

Capacitive connection to functional earth ground (FE)

Other symbols used are explained in the IL SYS INST UM E user manual or in the Inline system manual for your bus system.

Connection Example

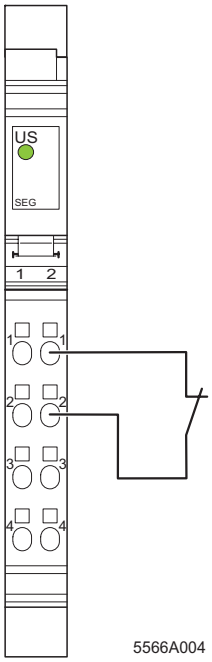


Figure 3 Connecting a switch

The switch can be used to create a switched segment circuit.

If this is not needed for your application, you will have to jumper connections 1.1 and 1.2 or 2.1 and 2.2 to ensure that the segment circuit is supplied from the main circuit.

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